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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,202	05/06/2005	Lucyna Pawlowska	CH7660US	5171
7590 Diderico van Eyl Lanxess Corporation 111 Ride Park West Drive Pittsburgh, PA 15275-1112		EXAMINER CORDRAY, DENNIS R		
		ART UNIT 1791		
		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,202

Applicant(s)

PAWLOWSKA ET AL.

Examiner

DENNIS CORDRAY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/4/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,44 and 45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,44 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 6/22/05,1/22/08

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of the invention of Group 1, Claims 1-12, 44 and 45 in the reply filed on 4/4/2008 is acknowledged. All claims to non-elected inventions have been cancelled. Claim 2 has also been cancelled and the content thereof added to Claim 1.

Oath/Declaration

The oath or declaration submitted 5/6/2005 is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective because:

It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

The originally submitted Oath recites the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56(a), rather than 37 CFR 1.56.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2-12, 44 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 44 and 45 recite a first component suspended in water and a second component that can be water. The second water component appears redundant since the first is suspended in water, thus water is already present. Is the second "water" component intended to be additional dilution water added to the water used to suspend the first component, is it intended to be a different kind of water (e.g.-doubly distilled deionized water), or is there some other kind of water contemplated?

Claim 11 recites that the ASA is present from about 0.001 to about 5 wt percent, but fails to recite the basis for the amount. Is the ASA present from about 0.001 to about 5 wt percent of the entire composition, from about 0.001 to about 5 wt percent of the first component or the second component, or is some other basis intended?

Claim 44 recites a heated first component. It is not clear how a first component can be heated in relation to the second component, since both components are included in the composition, which is at a temperature of more than about 40 °F. In other words, the first and second components are both at the same temperature, which is the temperature of the composition.

Claims 3-10 and 12 depend from and thus inherit the indefiniteness of Claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 6-8, 11, 12, 44 and 45 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dilts et al (WO 01/88262).

Claims 1, 3, 6-8, 11, 12 and 45: Dilts et al disclose a paper sizing composition comprising at least one sizing agent, which can be alkenylsuccinic anhydride (ASA) or alkylene ketene dimers (AKD), emulsified in water, at least one emulsion stabilizer, from 0.01% to about 15% by weight of at least one hydrophobic substance, based on the total weight of sizing agent, and from 0.01% to about 10% by weight of at least one surfactant, based on the total weight of sizing agent (Abs; p 3, lines 13-17; p 5, lines 23-27; p 18, lines 33-34). The sizing agent is present in an amount from about 0.1% to about 50%, preferably from about 3% to about 38%, based on the total weight of the emulsion (p 3, lines 33-34; p 22, lines 6-12). The hydrophobic substance can be a fatty acid ester or fatty alcohol, which reads on the claimed surfactant (p 3, lines 25-26; p 6, lines 10-13; p 12, lines 14-15). The surfactant can be

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ethoxylated fatty alcohols (ethoxylated alkyl phenol, nonyl phenoxy polyethoxy ethanol, etc.), polyethylene glycols, trialkyl amines (tertiary amines) and their acid and quaternary salts, polyoxyalkylene alkylaryl ethers or esters, ethoxylated phosphate esters, etc., which read on the claimed surfactant (p 19, lines 9-18). The emulsion stabilizers are well known in the art and can be synthetic and naturally occurring anionic and nonionic polymers, such as anionic polyacrylamides, carboxymethylcellulose, phosphorylated starch, non-hydrolyzed polyacrylamides, etc., which are water soluble (p 20, lines 5-12 and 30-33). The presence of the hydrophobic substance increases the sizing efficiency of the sizing agent (p 3, lines 6-8). Alternatively, both ASA and AKD are well known sizing agents in the art and are successfully used by Dilts et al to size paper and paperboard of all types (Abs; p23, line 26 to p 24, line 2). Thus the composition imparts useful sizing properties or, at least, such sizing properties would have been obvious to one of ordinary skill in the art.

Dilts et al do not disclose the claimed Cobb sizing or HST value, or that the composition is of sufficient dilution to minimize coalescence at a temperature of from about 40 to about 200 °F. However, the many embodiments of the disclosed composition are substantially identical to the claimed composition, thus have the claimed sizing and stability properties or, at least, such properties would have been obvious to one of ordinary skill in the art because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the

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structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Claim 4: Dilts et al disclose a particle size in the emulsion of about 5 μm or less (p 19, lines 19-26).

Claim 44: Dilts et al disclose several examples wherein the emulsion is stirred at temperatures above 40 °F to dissolve the hydrophobic material (pp 29-40). Alternatively, hydrophobic materials are generally more soluble at elevated temperatures and it would have been obvious to stir the emulsion at the claimed temperatures to dissolve the hydrophobic material.

Claims 1, 3, 4, 6-8, 11, 12, 44 and 45 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dilts et al (6576049).

The disclosures of Dilts et al ('049) and (WO 01/88262) are similar and the claims are rejected similarly (Abs; col 2, lines 46-67; col 3, lines 1-20 and 30-42; col 5, lines 9-12; col 9, lines 48-50; col 14, lines 46-48 and 63-67; col 15, lines 1-8, 31-33 and 40-49; col 16, lines 8-13; col 17, lines 8-16; col 18, lines 20-36; cols 22-30, Examples).

Claims 5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dilts et al (WO 01/88262 or '049) as evidenced by Chunyu ("Alkenyl Succinic Anhydrides (ASA): a Neutral Sizing Agent").

Claim 5: Dilts et al do not disclose hydrolyzed ASA. It is well known that ASA is very reactive and will readily hydrolyze in the presence of water (if evidence is needed, see Chunyu, p 3, Figure 4 and paragraph immediately below the figure). It would have been obvious to one of ordinary skill in the art to obtain an amount of hydrolyzed ASA within the claimed range due to the large amount of water present in the sizing compositions.

Claims 10 and 11: Dilts et al do not disclose whether the particle size distribution in the sizing compositions is monomodal or multimodal. However, compositions having a broad range of particle sizes up to 5 μm are disclosed by Dilts et al. No evidence of surprising results is given or discussed in the instant Specification for using a multimodal particle distribution over a monomodal distribution and no comparison is made with the nearest prior art cited herein. Absent any evidence of surprising properties of the solutions of the instant invention over the disclosure of Dilts et al or Novak, it would have been obvious to one of ordinary skill in the art to use any kind of particle distribution, monomodal or multimodal for the sizing composition of Yoshioka et al as functionally equivalent options.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

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1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2-12, 44 and 45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-13, 46 and 47 of copending Application No. 10/533190. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application embody compositions that overlap the instant Claims. The copending application recites aqueous sizing compositions comprising emulsions having the same cellulose reactive sizes and a surfactant (a) and a nonionic or anionic starch component, water, or water soluble polymer (b). The sizing compositions have the same or overlapping features and sizing effects on fibrous substrates.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 2-12, 44 and 45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-11, 30 and 33 of copending Application No. 10/533702. Although the conflicting claims

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are not identical, they are not patentably distinct from each other because the copending application recites aqueous sizing compositions comprising emulsions having the same cellulose reactive sizes and two nonionic or anionic starches. One of the starches is an emulsifying starch, thus acts as a surfactant. Alternatively, the open language of the copending claims allows for the additional surfactant and it would have been obvious to include a surfactant as claimed as an emulsification aid. The sizing compositions have the same or overlapping particle sizes and sizing effects on fibrous substrates.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/
Supervisory Patent Examiner, Art
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/Dennis Cordray/
Examiner, Art Unit 1791